REMARKS

I. Status of the Claims. Claims 1-11 are pending. Claims 1 and 4 have been amended, without prejudice or disclaimer.

Claim 1 has been amended to indicate explicitly that the dispersed silicone recited in the claim is "substantially linear." Support for the amendment is found in the specification at page 6, lines 15-17. The amendment to claim 1 is made for clarifying purposes only, but does not affect the scope of claim 1. The specification teaches that silicone-in-water emulsions are generally substantially linear. The explicit recitation of "substantially linear" thus does not narrow the scope of claim 1.

Claim 4 has been amended to correct an editorial error.

By this Amendment, no new matter has been added to the application.

II. Claim Rejections Under 35 U.S.C. § 103.

Claims 1-3 have been rejected under as being obvious over Beck *et al.*, U.S. Patent No. 5,939,478 ("Beck") in view of Boden, U.S. Patent No. 4,331,671 ("Boden"). Claims 4-11 have been rejected as being obvious over Beck in view of Boden and Trinh *et al.*, U.S. Patent No. 5,540,835 ("Trinh"). The rejections are respectfully traversed on the grounds that Beck, the primary reference cited by the Examiner, is defective at least for failing to disclose or suggest the silicone-in-water emulsion called for in the claims and neither Boden nor Trinh cures this defect. The rejections should thus be withdrawn.

Accordingly, the rejections should be withdrawn because a primary basis for the rejection is the Examiner's conclusion that Beck suggests the silicone-in-water emulsion called for in the claims and such a conclusion is not correct. The Examiner's stated basis for concluding that Beck discloses or suggests the silicone-in-water emulsion called for in the claims is that Beck teaches silicone emulsions derived from silicone polymers or pre-polymers of the formula $-(SiR^1{}_2\text{-}O)_z\text{-}$ (where z=500-5000, $R^1{}_2$-= aliphatic alkyl or alkenyl and is linear and which can be combined with a copolymer, that such polymer emulsions can contain end-blocked vinyl groups that react with sylyl (-Si=H-) groups on the polymer, that one such emulsion has particle sizes of about 732 ±449 nm and may contain above 75% solids, and "generally describes making pre-crosslinked, high

solids, gel phases emulsions." The Examiner further asserts that Beck meets the viscosity limitations called for in claims 2 and 3 because Beck's high solid gels "have viscosities that are higher than 60% solid-containing fluids described by the Applicant."

The Examiner's conclusion regarding Beck's composition is mistaken, however, because it is based only the properties of the starting materials used by Beck and otherwise mis-reads Beck. Notwithstanding the starting materials that were used, Beck thus does not disclose or suggest a silicone-in-water emulsion, as called for in the instant claims. The so –called silicone "emulsions" described in Beck are clearly identified as silicone latexes having a plurality of crosslinked polysiloxane particles (Abstract), and are prepared by the steps of mixing, emulsifying, diluting, adding a cure package and curing (Abstract) or as "stabilized aqueous crosslinked polysiloxane dispersions" (column 1, lines 46-49). Beck further discloses that the provided silicone latex "contains a crosslinked or cured rubber phase up to 95%" (column 2, lines 4-5) and that the "particular silicone latex represents several significant advances in the art" (column 2, lines 9-10). Beck thus discloses a three-dimensional network of crosslinked siloxane materials.

In contrast to Beck, the present application discloses that silicone-in-water emulsions are made, for example, by emulsion polymerization that includes a chain extension reaction. The specification thus sets forth that silicone-in-water emulsions are prepared by a method comprising:

> a) mixing materials comprising a composition containing at least one polysiloxane, at least one organosilicon material that reacts with the polysiloxane by a chain extension reaction, a metal containing catalyst for said chain extension reaction, at least one surfactant, and water to form a mixture, and b) emulsifying the mixture.

Specification at page 5, lines 5-10.

The term "chain extension reaction" refers to the lengthening of the polymer backbone by end-to-end reaction of polymers having one reactive group at each end. The polymers either react with each other through end-groups or react with a "chain extender," a shorter molecule again having two functional groups, one at each end, with which the polymers react. No crosslinking (or formation of three-dimensional networks) take place in this process. The use of a "chain extender" is in contrast to Beck's use of a crosslinker, which results in the formation of a

crosslinked latex. The specification at page 6, lines 15-17 further establishes that silicone-in-water emulsions comprise substantially linear polymers. Accordingly, one of ordinary skill in the art would immediately understand that the term "silicone" used in the phrase "silicone-in-water emulsion" denotes a substantially linear polysiloxane material rather than Beck's silicone latex comprising crosslinked siloxane materials.

In order to clarify the nature of the claimed compositions, claim 1 has been amended to explicitly recite that the silicone-in-water emulsion called for in the claims comprises substantially linear dispersed silicone. The amendment to claim 1 explicitly recites a feature that was inherent to the meaning of a silicone-in-water emulsion, based on the specification, and thus does not narrow the scope of claim 1. It is noted that claim 2, which is present in its original version, calls for a silicone-in-water emulsion comprising a linear polysiloxane polysilalkylene copolymer.

In short, Beck discloses silicone latex materials, but does not disclose or suggest the silicone-in-water emulsions comprising substantially linear or linear polymers that are called for in the instant claims.

The Examiner's specific assertions regarding Beck are further addressed as follows:

The Examiner's assertion that Beck "indicates the value of silicone emulsion composition types that can be especially useful as a perfume carrier and for hair conditioning (Col 10 lines 24-30 and Claim 10)" is not believed to be well taken. As set forth above, Beck is directed to silicone latexes and compositions comprising such latexes. Each of Beck's claims, for example, (including claim 10) is directed to silicone latexes. Claim 1 for example is directed to a method of modifying the viscosity of a solvent comprising "adding a silicone latex containing water and a plurality of cured polysiloxane particles to a solvent after the particles have been cured without removing water from the latex." Each of Beck's remaining claims 2-11 depends from claim 1 and each is thus each also directed to silicone latex-containing compositions, not a silicone-in-water emulsion, as called for in the instant claims. Similarly, Beck's disclosure at column 10 refers to "improved, stabilized, silicone latex thickened solvent compositions." *See* column 10, lines 31-32. Contrary to the Examiner's assertion, column 10 thus does not refer to silicone-in-water emulsions.

The Examiner also fails to appreciate that other portions of Beck are concerned solely with preparing and using a silicone latex. The text at column 2, lines 29-46, cited by the Examiner, explicitly recites "modifying the viscosity of a solvent by thickening the solvent with a silicone latex which has a plurality of crosslinked polysiloxane particles." As discussed above, although Beck's latex is derived from siloxane polymer starting materials, it has been cured, i.e., crosslinked.

Moreover, with respect to the compositions of siloxane polymer starting materials, Beck discloses at column 3, lines 4 to 27 (also cited by the Examiner) that the polymer used prior to crosslinking has a viscosity of between 5,000 to 500,000 centistoke. *See* column 3, lines 4-7. This viscosity is far lower than the viscosity of 100 million centistokes or more that is called for in the instant claims. This low-viscosity composition then is combined with a crosslinking agent (column 3, line 24) and a catalyst (column 3, line 25) or a self-catalytic crosslinker (column 3, lines 26-27) to form the crosslinked latex (i.e., not the silicone-in-water emulsion called for in the claims).

With respect to Example II (also cited by the Examiner), crosslinking is effected in the presence of a platinum-containing complex, because of the multiple vinyl groups in the first polymer from Example I used and the Si-H containing crosslinker specified in Example II, which has 5 Si-H groups per molecule. This will result in a crosslinked latex polymer and not in the silicone-in-water emulsion called for in the instant claims. Thus, Example II does not pertain to the instant claims.

Example X again is not pertinent to the instant claims because it discloses a silicone latex preparation. In particular, Example X utilizes a crosslinking material ($MD_8D"_4M$) that has four Si-H links per molecule. Example X is thus also directed to a crosslinked latex, and not to the silicone-containing compositions recited in the instant claims. The Examiner's specific reference to column 14, lines 55 – 66 as teaching that polymer emulsions can be formulated to contain end-blocked vinyl groups does not change the fact that Example X is directed to a crosslinked latex, and is thus not relevant.

Nor is the Examiner's citation of Beck's disclosure at column 2, lines 9-16 and column 5, lines 1-21 believed to be well taken. The Examiner's reference relating to the use of silicone dispersions containing a high percentage in solids and to a high solids gel phase emulsion is

confusing as there is no indication of viscosity in either of these passages. The compositions referred to in these passages are not the same as Applicants' compositions. Viscosity cannot be derived merely from a solids content. Sherman, for example, teaches that viscosity of a emulsion may depend upon the emulsifying agent, the electroviscous effect, particle size, and other factors. *See* P. Sherman, Rheologica Acta, Band 2, Heft 1 74-81 (1962) at page 75 (enclosed).

More specifically, there is no basis to conclude that because Example 1 of the application containing about 60% of a certain polymer has a viscosity of about 170 million centistoke another composition comprising a different polymer at a percentage above 60% would have a higher viscosity. Example 1 is thus unrelated to Beck's disclosure and the Examiner is thus incorrect to assert that any conclusions concerning the viscosity of Beck's solutions can be drawn from Example 1 of the specification. Moreover, in any event, as discussed above, Beck teaches that aqueous dispersions used to form latex contain siloxane polymer having a viscosity of between 5,000 to 500,000 centistoke, far below the viscosity called for in instant claims. *See* column 3, lines 4-7. Accordingly, Beck's disclosure at column 2, lines 9-16 and column 5, lines 1-21 not believed to teach, suggest or provide evidence that Beck discloses a silicone-in-water emulsion wherein the dispersed silicone has a viscosity of 100 million mm^2s^{-1}, as called for in the instant claims.

For all of the reasons set forth above, Beck fails to suggest the silicone-in-water emulsion called for in the instant claims. Neither Boden nor Trinh, the other prior art cited by the Examiner, includes any suggestion to modify Beck to arrive at the silicone-in-water emulsion called for in the instant claims. Thus, Neither Boden nor Trinh cures the defects in Beck. For at least this reason, the claims are not over Beck alone or in combination with Boden and/or Trinh. Reconsideration of the claims and withdrawal of all rejections based on Beck in view of Boden and/or Trinh is requested.

III. Conclusion. The application is believed to be in condition for allowance, which is earnestly solicited. Should the Examiner believes there are outstanding issues that could be

advanced by an Examiner's interview or an Examiner's amendment, the Examiner is invited to contact Applicant's attorney listed below.

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